Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multi-pane window having a magnetic mechanism for actuating a venetian blind disposed between ~~the~~ inner and outer glass panes thereof, the magnetic mechanism comprising:

an inner follower carriage disposed between the glass panes and being operable to actuate said venetian blind when moved;

an external housing disposed on a surface of the inner glass pane opposite to the inner follower carriage, the external housing having an external carriage disposed therein ~~outside the glass panes and~~ magnetically coupled to said inner follower carriage via said inner glass pane, said external carriage being moveable with respect to the external housing ~~thereby~~ to move said inner follower carriage, and movement of the external carriage being guided by the external housing; and

at least one friction reducing element to facilitate movement of at least one of said carriages over the inner glass panepanes.

2. (Original) A multi-pane window according to claim 1 wherein said at least one friction reducing element is at least one rolling mobilizer.

3. (Original) A multi-pane window according to claim 2, wherein said at least one rolling mobilizer includes at least one wheel set coupled to said inner follower carriage.

4. (Original) A multi-pane window according to claim 2, wherein said at least one rolling mobilizer includes at least one wheel set coupled to each of said inner follower carriage and external carriage.

5. (Original) A multi-pane window according to claim 4, wherein said inner follower carriage includes at least one U-shaped carriage assembly housing a magnet, and wherein said at least one wheel set is secured to said U-shaped carriage assembly.

6. (Original) A multi-pane window according to claim 5, comprising

a series of carriage assemblies, said carriage assemblies being coupled to a chassis.

7. (Original) A multi-pane window according to claim 6, wherein the couple between each of said carriage assemblies and said chassis is a floating couple.

8. (Original) A multi-pane window according to claim 1, wherein said magnetic mechanism is a tilt mechanism comprising:

a spiral actuator rod rotatably supported by at least one cradle assembly and coupled to tilt lines of said venetian blind, said inner follower carriage being operable to rotate said spiral actuator rod thereby to pay in or pay out said tilt lines.

9. (Original) A multi-pane window according to claim 8, wherein said at least one cradle assembly comprises:

a set of rollers arranged to form a channel to receive said spiral actuator rod and permit said spiral actuator rod to rotate freely.

10. (Original) A multi-pane window according to claim 8, wherein said tilt mechanism further comprises:

a stop operable to inhibit axial movement of said spiral actuator rod.

11. (Original) A multi-pane window according to claim 10, wherein said stop comprises a bearing mounted in a thrust plate.

12. (Original) A multi-pane window according to claim 2, wherein said at least one rolling mobilizer is at least one set of ball-bearings coupled to said inner follower

carriage.

13. (Original) A multi-pane window according to claim 2, further comprising:

a track having at least one set of rolling mobilizers rotatably coupled thereto, and wherein said at least one of said inner follower carriage and said external carriage travel along said track atop said rolling mobilizers.

14. (Original) A multi-pane window according to claim 13, wherein said rolling mobilizers are wheels.

15. (Original) A multi-pane window according to claim 13, wherein said rolling mobilizers are ball-bearings.

16. (Original) A multi-pane window according to claim 1 wherein said magnetic mechanism is a raise/lower mechanism coupled to a raise/lower line of said venetian blind.

17. (Original) A multi-pane window according to claim 16 wherein said at least one friction reducing element is at least one rolling mobilizer.

18. (Original) A multi-pane window according to claim 17, wherein said at least one rolling mobilizer is at least one wheel set secured to said inner follower carriage.

19. (Original) A multi-pane window according to claim 17, wherein said at least one rolling mobilizer is at least one wheel set secured to said inner follower carriage and said external carriage.

20. (Original) A multi-pane window according to claim 19, wherein said inner follower carriage comprises: at least one U-shaped carriage assembly housing a magnet, and wherein said at least one wheel set is secured to said U-shaped carriage assembly.

21. (Original) A multi-pane window according to claim 20, comprising a series of carriage asemblies, said carriage assemblies being coupled to a chassis.

22. (Original) A multi-pane window according to claim 16, wherein the couple between each of said carriage assemblies and said chassis is a floating couple.

23. (Original) A multi-pane window according to claim 22, wherein movement of said external carriage is restricted between upper and lower limits.

24. (Original) A multi-pane window according to claim 16, further comprising: a clutch coupled to said external carriage, said clutch decoupling from said external carriage when a force is applied to said clutch that exceeds a threshold level during movement of said external carriage to inhibit said external carriage and said inner follower carriage from magnetically decoupling.

25. (Original) A multi-pane window according to claim 16, further comprising: at least one stop to limit travel of said inner follower carriage.

26. (Original) A multi-pane window according to claim 16, further comprising: a multiplier operable to increase the pull ratio of said magnetic raise/lower mechanism.

27. (Original) A multi-pane window according to claim 26, further comprising: a tubular housing accommodating said inner follower carriage; and a tangle inhibitor within said housing above said inner follower carriage to inhibit tangling of slack in said raise/lower line.

28. (Original) A multi-pane window according to claim 27, further comprising an accumulator within said housing to gather slack in said raise/lower line.

29. (Original) A multi-pane window according to claim 1 wherein at least one of said inner follower carriage and said external carriage have a structured sliding surface to facilitate movement of said at least one of said inner follower carriage and said external carriage over said glass panes.

30. (Original) A multi-pane window according to claim 29, wherein said structured sliding surface comprises a number of raised protrusions.

31. (Original) A multi-pane window according to claim 30, further comprising:

an insert positioned between said protrusions, said insert being impregnated with a lubricant.

32. (Original) A multi-pane window according to claim 29, wherein said structured sliding surface is comprised of a celled structure having a number of cells.

33. (Original) A multi-pane window according to claim 32, further comprising:

a contact pad inserted into one of said cells.

34. (Original) A multi-pane window according to claim 33, wherein said contact pad is impregnated with a lubricant.

35. (Original) A multi-pane window according to claim 33, wherein said contact pad is equipped with a ball-bearing.

36. (Original) A multi-pane window according to claim 33, wherein said contact pad is equipped with a roller.

37. (Original) A multi-pane window according to claim 1 wherein at least one of said inner follower carriage and said external carriage has a sliding surface;

said window further comprising: an anti-friction surface on said glass panes adjacent said at least one of said inner follower carriage and said external carriage.

38. (Original) A multi-pane window according to claim 37, wherein said anti-friction surface comprises of a pad.

39. (Original) A multi-pane window according to claim 37, wherein said anti-friction surface comprises tape.

40. (Original) A multi-pane window according to claim 37, wherein said anti-friction surface comprises an applied coating.

41. (Original) A multi-pane window according to claim 37, wherein said anti-friction surface comprises a fused coating.

42. (Original) A multi-pane window according to claim 37, wherein said anti-friction surface comprises a structured sliding surface.

43. (Currently Amended) A multi-pane window having a magnetic raise/lower mechanism for raising and lowering a venetian blind disposed between ~~the~~ glass panes thereof, the magnetic raise/lower mechanism comprising:

a raise/lower line coupled to the venetian blind;

an inner follower carriage disposed between the glass panes and operable to actuate said raise/lower line thereby to move said venetian blind, said inner follower carriage including a first plurality of magnetic carriage assemblies arranged adjacent to each other;

an external carriage disposed outside said glass panes and magnetically coupled to said inner follower carriage, said external carriage being moveable to move said inner follower carriage and actuate the raise/lower line and including a second plurality of magnetic carriage assemblies arranged adjacent to each other, the second magnetic carriage assemblies being magnetically coupled to the first magnetic carriage assemblies of said inner follower carriage; and

a multiplier acting on the raise/lower line to increase the pull ratio of said magnetic raise/lower mechanism.

44. (Original) A multi-pane window according to claim 43, wherein said multiplier provides a pull ratio of at least two to one.

45. (Original) A multi-pane window according to claim 44, wherein said multiplier comprises a pulley coupled to said inner follower carriage and said wherein said raise/lower line is routed around said pulley and secured to a fixed point above said inner follower carriage.

46. (Original) A multi-pane window according to claim 44, further comprising:

a first elevator line secured to said inner follower carriage; a two-step pulley having a smaller pulley portion and a larger pulley portion, said first elevator line being routed around said smaller pulley portion; a second elevator line routed around said larger pulley portion; and a secondary elevator secured to said second elevator line and coupled to said raise/lower line.

47. (Original) A multi-pane window according to claim 44, wherein said multiplier provides a pull ratio of at least three to one.

48. (Original) A multi-pane window according to claim 47, further comprising:

an elevator coupled to said inner follower carriage via an elevator line and operable to move in a direction opposite to said inner follower carriage; and

wherein said multiplier comprises a two-step multiplier pulley coupled to said inner follower carriage, said two-step multiplier pulley having a smaller pulley portion and a larger pulley portion; and wherein said raise/lower line is secured to said larger pulley portion; and

wherein a wind line is secured at a first end to said elevator and at a second end to said smaller pulley portion.

49. (Original) A multi-pane window according to claim 47, further comprising:

an elevator coupled to said inner follower carriage via an elevator line and operable to move in a direction opposite to said inner follower carriage; and

wherein said multiplier comprises a pulley coupled to said inner follower carriage; and

wherein said raise/lower line is secured to said elevator at a first end and routed around said pulley.

50. (Original) A multi-pane window according to claim 47, further comprising:

an elevator coupled to said inner follower carriage via an elevator line and operable to move in a direction opposite to said inner follower carriage; and

wherein said multiplier comprises a first pulley coupled to said inner follower carriage, a second pulley coupled to said elevator, and at least one idler pulley, said raise/lower line being secured at one end thereof, routed around said at least one idler pulley, around said first pulley and said second pulley, and back around said at least one idler pulley.

51. (Original) A multi-pane window having a magnetic raise/lower mechanism for raising and lowering a venetian blind disposed between the glass panes thereof, the magnetic raise/lower mechanism comprising:

a raise/lower line coupled to the venetian blind;

an inner follower carriage disposed between the glass panes and operable to actuate said raise/lower line thereby to move said venetian blind;

an external carriage disposed outside the glass panes and magnetically coupled to said inner follower carriage, said external carriage being moveable to move said inner follower carriage and actuate the raise/lower line;

an external slider coupled to said external carriage and operable to move said external carriage when said external slider is moved; and

a clutch acting between said external carriage and said external slider and operable to decouple said external carriage from said external slider when a force

exceeding a threshold level is applied to said external slider to inhibit said external carriage and said inner follower carriage from magnetically decoupling.

52. (Original) A multi-pane window according to claim 51, wherein said clutch is mechanical.

53. (Original) A multi-pane window according to claim 51, wherein said clutch comprises:

a first magnet secured to said external carriage; and

a second magnet secured to said external slider, said second magnet being magnetically coupled to said first magnet by a magnetic force that is less than the magnetic force coupling the external carriage and the inner follower carriage.

54. (Original) A multi-pane window according to claim 53, wherein said first magnet and said second magnet magnetically couple when said first magnet and said second magnet abut.

55. (Original) A multi-pane window according to claim 53, wherein said clutch further comprises:

a first feature on said external carriage; and

a second feature on said external control operable to engage said first feature when said external carriage is positioned adjacent said external control.

56. (Original) A multi-pane window having a magnetic raise/lower mechanism for raising and lowering a venetian blind disposed between the glass panes thereof, comprising:

a raise/lower line coupled to the venetian blind;

an inner follower carriage disposed in a tubular housing between the glass panes and operable to actuate said raise/lower line thereby to move said venetian blind;

an external carriage disposed outside the glass panes and magnetically coupled to said inner follower carriage, said external carriage being moveable to move said inner follower carriage and actuate said raise/lower line; and

an accumulator disposed above said inner follower assembly and encompassing said raise/lower line to gather slack accumulating in said raise/lower line.

57. (Original) A multi-pane window according to claim 56, wherein said accumulator is secured at one end to said inner follower carriage and at an opposite end to a stop within said housing.

58. (Original) A multi-pane window according to claim 56, wherein said accumulator comprises:

a fan-like member having a number of folds defining fan segments and at least one through-hole in each fan segment through which said raise/lower line is routed, said fan gathering said raise/lower line between fan segments when compressed.

59. (Original) A multi-pane window according to claim 56, wherein said accumulator is a tubular member having folding walls and a through-passage through which said raise/lower line is routed, said folding walls gathering said raise/lower line when said tubular member is compressed.

60. (Original) A multi-pane window according to claim 59, wherein said accumulator further comprises: an internal folding wall disposed in said tubular member to gather said raise/lower line.

61. (Original) A multi-pane window according to claim 59, wherein said accumulator further comprises: at least one post disposed in said tubular member to gather said raise/lower line.

62. (Original) A multi-pane window according to claim 59, wherein said

accumulator is a telescopic member having a through-passage through which said raise/lower line is routed and operable to gather said raise/lower line when compressed.

63. (New) A multi-pane window having a magnetic mechanism for actuating a venetian blind disposed between glass panes thereof, the magnetic mechanism comprising:

an inner carriage disposed between the glass panes and operable to actuate said venetian blind when moved along the glass panes, said inner carriage including a first support plate having a first plurality of magnetic carriage assemblies arranged thereon; and

an external carriage disposed outside the glass panes and including a second support plate having a second plurality of magnetic carriage assemblies arranged thereon such that said external carriage is moveable along said glass panes to move said inner carriage.

64. (New) The multi-pane window of claim 63, wherein the first magnetic carriage assemblies are floatingly and magnetically coupled to the first support plate, the second magnetic carriage assemblies are floatingly and magnetically coupled to the second support plate, and the first magnetic carriage assemblies are floatingly coupled with the second magnetic carriage assemblies via one of the glass panes.

65. (New) A venetian blind actuating mechanism usable to actuate a venetian blind disposed between inner and outer glass panes of a multi-pane window, the mechanism comprising:

an inner carriage disposable between the glass panes and operable to actuate said venetian blind when moved along the glass panes, said inner carriage including a first plurality of magnetic carriage assemblies arranged adjacent to each other; and

an external carriage disposable outside the glass panes and including a second plurality of magnetic carriage assemblies arranged adjacent to each other, the second magnetic carriage assemblies being magnetically coupled to the first magnetic carriage

assemblies of said inner carriage such that said external carriage is moveable along said glass panes to move said inner carriage.